

# *Eye & Vision*

**Prepared by:**

**Asuda Rostam**

**Alla Sabr**

**Abdulla Sabr**

**Vana Bahjat**

**Midya Majid**

**Mardin Majid**

**Supervised by:**

**Dr.Nashwan**

**Karhi**

# Out Line

- Definition
- Anatomy of eye
- What is Snellen chart ?
- Instruments use in ophthalmology
- Age and Vision
- Correction of Vision
- Eye and Diseases

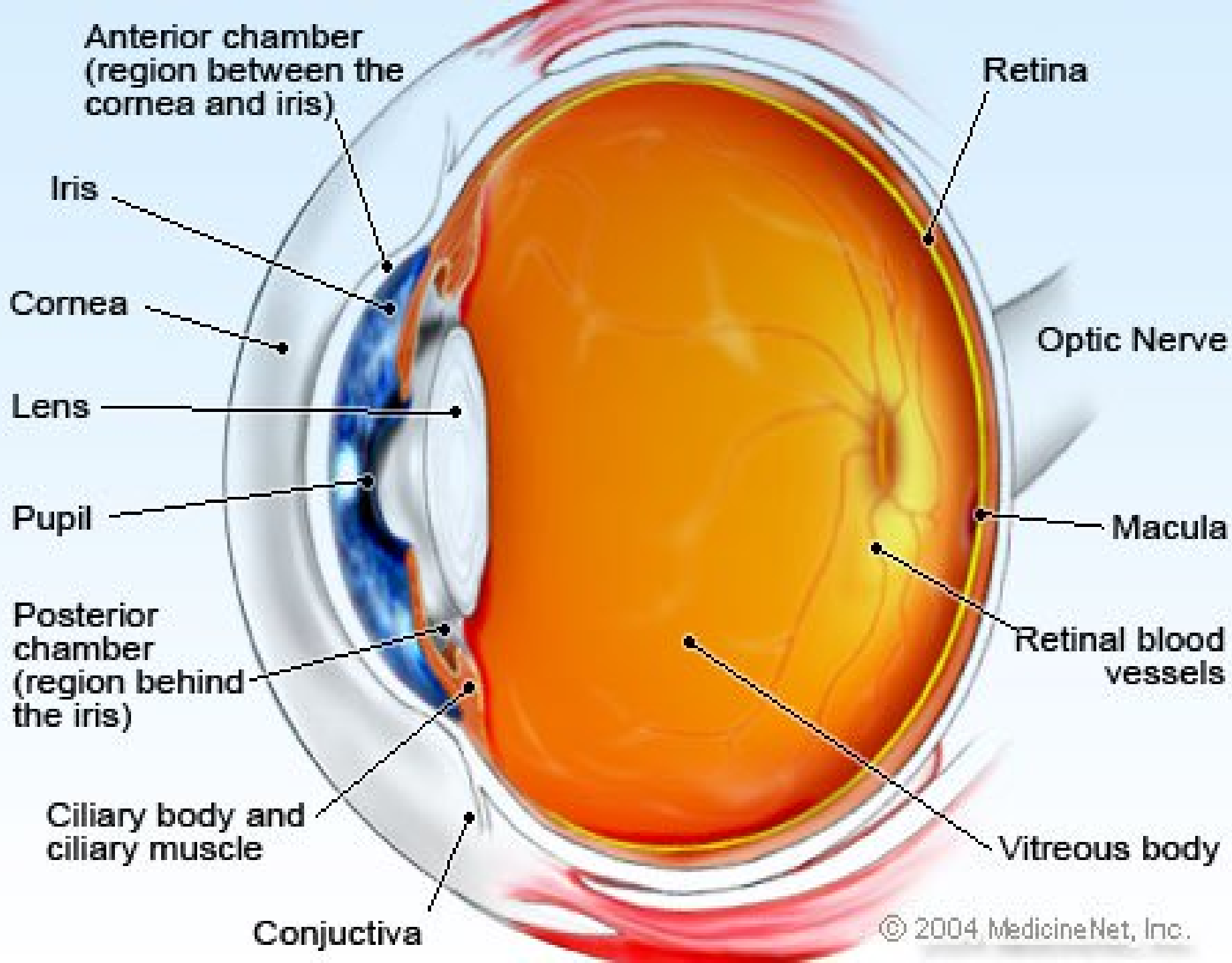
# Definition

- The human eye is one of the most valuable sense organs, and eyes react to pressure and light from our surrounding environment,
- Eyes can observe event over a very large angle while looking intently at an object directly ahead of it
- Eyes receive light photons that emit from objects and convert it to an electrical impulse by optical nerves at the back of the eye and transmitted to brain

# Anatomy of eye

The eye is our organ of sight, the eye has a number of components which include but are not limited to the :

1. Cornea
2. Iris
3. Pupil
4. Lens
5. Retina
6. Macular
7. Optic nerve
8. Choroid and Vitreous



# What is snellen chart?

- A **Snellen chart** is an eye chart that can be used to measure visual acuity. Snellen charts are named after the Dutch ophthalmologist Herman Snellen, who developed the chart in 1862.<sup>[1]</sup> Many ophthalmologists and vision scientists now use an improved chart known as the LogMAR chart.

- The normal Snellen chart is printed with eleven lines of block letters. The first line consists of one very large letter, which may be one of several letters, for example E, H, or N. Subsequent rows have increasing numbers of letters that decrease in size. A person taking the test covers one eye from 6 metres or 20 feet away, and reads aloud the letters of each row, beginning at the top. The smallest row that can be read accurately indicates the visual acuity in that specific eye. The symbols on an acuity chart are formally known as "optotypes". In the case of the traditional Snellen chart, the optotypes have the appearance of block letters, and are intended to be seen and read as letters. They are not, however, letters from any ordinary typographer's font. They have a particular, simple geometry in which:

E

1 20/200

F P

2 20/100

T O Z

3 20/70

L P E D

4 20/50

P E C F D

5 20/40

E D F C Z P

6 20/30

F E L O P Z D

7 20/25

D E F P O T E C

8 20/20

L E F O D P C T

9

F D F L T C E O

10

F E E O L C F T O

11



# Instruments use in ophthalmology

- 1.Ophthalmoscope
- 2.Retinoscope
- 3.Keratometer
- 4.Tonometer
- 5.Lensometre
- 6. Ultrasound
- 7.The slit lamp
- 8.The Autorefractor

# AGE AND VISION

- Everyones vision can change with age
- Some vision changes make it difficult to perform everyday activities
- These changes can also impact ones feeling of independence

# Correction of vision

- Some of the common vision changes can be corrected with the following :
- Glasses
- Contact lenses
- Improved lighting

# Eye and disease

- There are so many different conditions that can affect the eye. Some are not cause for concern but conditions such as glaucoma can lead to serious visual impairment and even blindness.
- Problems affecting the eye can range from infections of the eye or the eyelid, genetically inherited eye problems, eye injuries or objects in the eye, and eye disorders that are the result of conditions that affect many organs (e.g. diabetes or hypertension).

# what is glaucoma ?

- Glaucoma results from pressure within the eye that damages the retina.
- Worldwide, glaucoma is the second highest cause of blindness after cataracts, according to the World Health Organization.
- Early detection is essential to preserve your sight and diagnosis is the first step

# TREATING GLAUCOMA

- *Glaucoma can be treated with eye drops, pills, laser surgery, traditional surgery or a combination of these methods. The goal of any treatment is to prevent loss of vision, as vision loss from glaucoma is irreversible. The good news is that glaucoma can be managed if detected early, and that with medical and/or surgical treatment, most people with glaucoma will not lose their sight*
- *Taking medications regularly, as prescribed, is crucial to preventing vision-threatening damage*

# Glaucoma

Glaucoma has been rightly called the  
"The silent stealer of eyesight".



Thank  
you!